WHAT IS CLAIMED IS:

1. An electrochemical battery comprising:

a stack of bipolar wafer cells connected in series, each cell having an area expandable in response to pressure that is aligned with a corresponding area of at least one adjacent cell;

a trigger mechanism responsive to a force created by pressure generated in a cell in the stack of bipolar cells.

2. The electrochemical battery of claim 1, wherein the trigger mechanism is coupled to a cell at the end of the stack of bipolar wafer cells.

3. The electrochemical battery of claim 1, wherein the force is created by pressure generated in more than one cell in the stack of bipolar cells.

4. The electrochemical battery of claim 1, wherein each cell includes a cell envelope and the area expandable in response to pressure comprises:

an extension of the cell envelope fabricated into each cell in the stack of bipolar cells.

5. The electrochemical battery of claim 1, wherein the area expandable in response to pressure comprises:

a bias corner of each cell in the stack of bipolar cells.

6. The electrochemical battery of claim 1, wherein each cell includes multiple areas expandable in response to pressure that are aligned with corresponding areas of adjacent cells.

7. The electrochemical battery of claim 1, wherein the trigger mechanism comprises:

a metal foil strip that exhibits a spring constant of deflection that can be adjusted to reproduce simple movement as a function of the pressure generated by a cell; and

a micro-switch operatively coupled to the metal foil strip.

8. The electrochemical battery of claim 1, wherein the trigger mechanism comprises:

a metal strip including a bonded strain gauge.

9. The electrochemical battery of claim 8, further comprises:

a retaining strip;

a tie rod coupled to the retaining strip and the metal strip to retain the stack of bipolar wafer cells.

10. The electrochemical battery of claim 8, further comprises:

a circuit that is to power the strain gauge and to generate an output signal as a function of the strain gauge deflection and battery pressure is used to control battery charge and discharge.

11. The electrochemical battery of claim 1, wherein the circuit comprises:

a constant voltage power supply powered from battery voltage that is to power the strain gauge;

an amplifier that is to increase the signal output from the strain gauge;

a voltage comparator that is to monitor the strain gauge output voltage; and

if the strain gauge output voltage reaches a preset level, a switch coupled to the comparator to interrupt battery charge or discharge.

12. The electrochemical battery of claim 11, wherein the switch is a relay.

13. The electrochemical battery of claim 11, wherein the switch is a solid state switch.

14. The electrochemical battery of claim 11, wherein the switch is field effect transistor (FET).

15. The electrochemical battery of claim 1, further comprises:

means for terminating battery charge and discharge.

16. The electrochemical battery of claim 1, wherein the trigger mechanism is to interrupt battery charge or discharge until the cell pressure decreases to a preset level.

17. The electrochemical battery of claim 1, wherein the trigger mechanism is to reduce a rate of charge and discharge to a predetermined level to optimize battery charge efficiency and thermal stability.

18. An electrochemical battery comprising:

a stack of wafer cells; and

an inflatable bladder coupled to the stack of cells, wherein a force created by pressure generated in a cell in the stack wafer cells is transmitted to the inflatable bladder and is used by the inflatable bladder to control a charge or discharge of the battery.

19. A method for controlling a stack of bi-polar wafer cells connected in series, the method comprising:

sensing a force created by pressure generated in a cell in the stack of bipolar cells;

transmitting the sensed force to a trigger mechanism;

terminating a charging of the cell in response to an output of the trigger mechanism.

20. The method of claim 19, further comprising:

terminating a discharging of the cell in response to the output of the trigger mechanism.

21. The method of claim 19, wherein the pressure is sensed in an area of the cell that is expandable in response to pressure.

22. The method of claim 21, further comprising:

aligning the area expandable in response to pressure of each cell with a corresponding area of at least on adjacent cell.

23. The method of claim 19, further comprising:

sensing the force created by pressure generated in the cell on an extension of the cell that is fabricated into each cell in the stack of cells.

24. A system for controlling a battery, the system comprising:

a bi-polar wafer cell including an extension tab fabricated into the cell;

a deflection strip coupled to the extension tab, the deflection strip deflecting in response to an expansion of the extension tab as a result of a force created by pressure generated in the cell;

a trigger mechanism coupled to the deflection strip.

25. The system of claim 24, wherein the trigger mechanism is to control at least one of a charge and discharge of the battery in response to the deflection of the deflection strip.

26. The system of claim 24, further comprising:

a plurality of bi-polar wafer cells that are stacked and connected in series, wherein the extension of each cell in the plurality of cells are aligned with each other and a force created by pressure generated in any cell in the plurality of cells can deflect the deflection strip.

27. The system of claim 24, further comprising:

a power supply to provide power to the trigger mechanism, wherein the power supply receives power from the battery.

28. The system of claim 27, further comprising:

an amplifier having an input, wherein the trigger mechanism is to output a trigger signal in response to the deflection of the deflection strip to the input of the amplifier and the amplifier to output an amplified trigger signal.

29. The system of claim 28, further comprising:

a switch coupled to the amplifier and the battery, the switch is to terminate the charge of the battery in response to the amplified trigger signal.

30. The system of claim 28, further comprising:

a switch coupled to the amplifier and the battery, the switch is to terminate the discharge of the battery in response to the amplified trigger signal.

31. The system of claim 24, wherein the trigger mechanism is a micro-switch.

32. The system of claim 24, wherein the trigger mechanism is a solid state switch.